PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Conrardus H. J. Theeuwen, et al.	Docket: ACM 2975 P1US
Serial No.: 10/537,199	Group Art Unit: 1794
Int'l Application No.: PCT/EP2003/13682 Int'l Filing Date: December 1, 2003	Examiner: Carolyn A. Paden Confirmation Number: 3168
For: USE OF CARBOXYMETHYL CELLULOSE (CMC) IN FRUIT-BASED PRODUCTS	

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

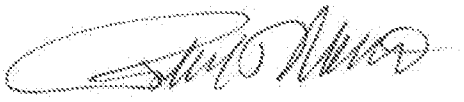
BRIEF ON APPEAL

Further to the Notice of Appeal filed October 16, 2008, Appellants are submitting this Appeal Brief for the above-identified application. Appellant hereby requests reconsideration and reversal of the Final Rejection of claims 1-9.

In compliance with 37 C.F.R. § 41.37(a)(1), this Brief is being timely filed within the time allowed for response to the action from which the Appeal was taken, with a two-month extension of time pursuant to 37 C.F.R. § 1.136(a)(1).

The fees for filing a Brief in support of an Appeal under 37 C.F.R. § 40.20(b)(2), together with any extension fee required in connection with the filing of this Brief, are provided herewith.

Respectfully submitted,



Ralph J. Mancini
Attorney for Applicant(s)
Reg. No. 34,054

Akzo Nobel Inc.
Legal & IP
120 White Plains Road, Suite 300
Tarrytown, NY 10591
(914) 333-7454

TABLE OF CONTENTS

I. INTRODUCTION

Pursuant to the provisions of 35 U.S.C. §134 and 37 C.F.R. §1.191, this paper is submitted as a brief setting forth the authorities and arguments upon which Appellants rely in support of the Appeal from the Final Rejection of claims 1-9 entered in the above-identified patent application on May 16, 2008 and maintained in the Advisory Actions mailed July 29, 2008 and December 5, 2008.

II. REAL PART IN INTEREST

The real part in interest is Akzo Nobel nv, Arnhem, The Netherlands.

III. RELATED APPEALS AND INTEREFERENCES

There are no prior or pending appeals, interferences, or judicial proceedings known to Appellant, the Appellants' legal representative, or assignee which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending Appeal.

IV. STATUS OF THE CLAIMS

Claims 1-9 are currently pending. All pending claims, namely claims 1-9, stand finally rejected and are appealed.

V. STATUS OF THE AMENDMENTS

A Response after the Final Rejection was filed on July 16, 2008 and a Supplemental Response was filed on August 26, 2008. No amendments were made in either of these responses; therefore, no amendments were made after the Final Rejection.

VI. SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention generally relates to a fruit-based product that comprises carboxymethyl cellulose (CMC). Citations to the specification providing support for the recited claim limitations are stated in this section in parentheses. In an exemplary embodiment of the invention, such as recited in claim 1, the fruit-based product comprises CMC (page 2, lines 17-18), wherein the CMC is characterized by forming a gel at 25°C after high-shear dissolution in a 0.3 wt% aqueous sodium chloride solution (page 2, lines 18-20), the final content of the CMC in the aqueous sodium chloride solution being 1 wt% for a CMC having a degree of polymerization (DP) of >4,000 (page 2, lines 20-22), 1.5 wt% for a CMC having a DP of 3,000-4,000 (page 2, line 22), 2 wt% for a CMC having a DP of 1,500-<3,000 (page 2, lines 22-23), and 4 wt% for a CMC having a DP of <1,500 (page 2, lines 23-24, the gel being a fluid having a storage modulus (G') which exceeds the loss modulus (G") over the entire frequency region of 0.01-10 Hz when measured on an oscillatory rheometer operating at a strain of 0.2 (page, lines 24-26).

Claim 2 relates to the fruit-based of claim 1, wherein the CMC has a Brookfield viscosity of more than 9,000 mPa.s after high-shear dissolution in a 0.3 wt% aqueous sodium chloride solution (page 5, lines 14 and 7-10), the final content of the CMC in the aqueous sodium chloride solution being 1 wt% for a CMC having a degree of polymerization (DP) of >4,000 (page 5, lines 10-12), 1.5 wt% for a CMC having a DP of >3,000-4,000 (page 5, line 12), 2 wt% for a CMC having a DP of 1,500-3,000 (Page 5, lines 12-13), and 4 wt% for a CMC having a DP of <1,500 (page 5, lines 13-14).

Claim 3 is directed to the fruit-based product of claim 1 wherein the pH of the fruit-based product is between 1 and 6 (page 7, lines 9-10).

Claim 4 relates to the fruit-based product of claim 1 wherein the CMC has a DP of 1,500 or more (page 4, lines 26-28).

Claim 5 is directed to the fruit-based product of claim 4 wherein the CMC is prepared from linters cellulose or wood cellulose (page 4, lines 26-28).

Claim 6 relates to the fruit-based product of claim 1 wherein the CMC has a DS of 0.6 to 1.2 (page 5, lines 1-4).

Claim 7 is directed to the fruit-based product of claim 1 wherein the fruit-based product is a jam, a fruit preserve, a pie filling, a fruity sauce, a fruity filling in bakery products, a fruit-based topping, a beverage comprising fruit, a jelly or a sweet (page 6, lines 14-18).

Claim 8 relates to the fruit-based product of claim 1 wherein the CMC is used in combination with pectin, carrageenan, starch, alginate, xanthan, konjac, locust bean gum, guar gum, or food protein (page 6, lines 25-28).

Claim 9 is directed to the fruit-based product of claim 1 wherein the CMC is used in an amount of 0.05 to 1.5 wt%, based on the total weight of the fruit-based product (page 7, lines 25-27).

VII. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection to be reviewed on Appeal are summarized as follows:

Whether claims 1-9 are unpatentable under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,593,468 ("Lange") in view of U.S. Patent No. 3,418,133 ("Nijhoff") and U.S. Patent No. 3,928,252 ("Rigler").

VIII. ARGUMENT

As set forth in the final Official Action dated May 16, 2008, the Office rejects claims 1-9 under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,593,468 ("Lange") in view of U.S. Patent No. 3,418,133 ("Nijhoff") and U.S. Patent No. 3,928,252 ("Rigler"), as summarized below.

In response to the final rejection, Appellants provide the following distinguishing commentary, which is believed to place the present case in condition for allowance. Reversal of the final rejection of all of the pending claims is respectfully requested.

A. Rejection of Claims 1-9 under 35 U.S.C. 103(a)

In the final Office Action, the Office rejected claims 1-9 as obvious over Lange in view of Nijhoff and Rigler. At page 2 of the final Office Action, the Office indicated that the rejection of the claims is "set forth in paragraph no. 5, Paper No. 20071126." In this Paper, namely the non-final Office Action dated December 3, 2007, the Office essentially asserted that Lange discloses all of the features of claim 1, except that "Lange does not specifically teach the use of the cellulose in a fruit-based product, the use of specific percentages of DP ranges, or the specific use of a [*sic*] oscillatory rheometer operating at a strain of 0.2 to measure G' and G"." (Office Action page 4).

The Office cited to Nijhoff and Rigler as allegedly making up for the deficiencies of Lange. As set forth in the Office Action dated December 3, 2007, at page 5, the Office asserted that "Nijhoff and Rigler disclose ranges of differing DP or viscosities of the CMC used to make the differing products taught in the examples." It was alleged that "[s]ubstituting differences in concentration of the differing DP's of the CMC is an obvious variation on what is already generally known in order to achieve the optimum combination for the desired outcome." (*Id.*) Further, the Office then alleged that Lange suggests the use of one of two viscometers to measure G' and G", and that it would have also been obvious to use any appropriate viscometer at the appropriate strain to measure the viscoelastic properties of the product. (*Id*).

The Office ultimately concluded that because Lange, Nijhoff and Rigler allegedly all teach a CMC based food product that employs high DP cellulose mixed with an alkaline solution, it would have been obvious to one of ordinary skill in the art to have created a fruit based CMC as claimed by Appellants. More specifically, the Office asserted that because Lange, Nijhoff and Rigler all allegedly "teach a CMC based food product that employs high DP cellulose mixed with an alkaline solution, it would have been obvious at the time of the invention, to have created a fruit-based CMC with high DP cellulose of the ranges claimed in an aqueous sodium chloride solution which will inevitably result in a storage modulus G' exceeding the loss modulus G" over a frequency range as suggested and taught by Lange." (*Id.* at pages 5-6).

As the Office more succinctly summarized the rejection in the Advisory Action dated December 5, 2009, the Office stated that "[a]ll applied references disclose the use of CMC in food products thereby rendering it obvious to substitute one type of CMC for another type of CMC in a food product in the absence of unexpected results for using the claimed CMC in fruit based food products."

B. <u>Response to Rejections of Claims 1-9 under 35 U.S.C. 103(a)</u>

In order to maintain a rejection under 35 U.S.C. § 103, the differences between the claimed invention and the prior art must be obvious to a person of ordinary skill in the art at the time the claimed invention was made. Further, "[t]he examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness." M.P.E.P. § 2142; see also, *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). "If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness." *Id.* Thus, it is only when the examiner does produce a *prima facie* case that it is incumbent on the Appellant to provide evidence, such as unexpected results, to overcome the rejection. See *Id.*

Here, Appellants submit that the Office has failed to establish a *prima facie* case of obviousness for at least the reasons set forth below, and that the Office's requirement for providing evidence of secondary considerations, such as unexpected results, is not required.

1. Differences Between the Claimed Invention and the Cited Art

In comparing the claimed invention to the cited art, Appellants submit that the primary reference to Lange (which is an U.S. equivalent of WO 99/20657 discussed in the application (last lines of p. 3)) discloses CMCs according to the present invention that are characterized in that they have a G' that is greater than G" over the frequency range of 0.1-100 Hz when measured as indicated in claim 1, which basically means that these CMCs are "capable" of forming gels. Appellants further submit that Lange discloses the use of these CMCs in food, cosmetics, and pharmaceuticals. However, Appellants submit, and as the Office recognizes, Lange does not disclose or suggest the use of such gel-forming CMCs in fruit-based products.

The secondary references, namely Nijhoff and Rigler, disclose state of the art, or conventional, CMCs and their use in fruit-based products. More specifically, Rigler discloses CMCs for use in fruit-based products. For the CMCs of Rigler, the dissolution in combination with salt does not require high shear but can be performed using normal shear (see col. 2, lines 36-46 and col. 4, lines 4-11). In comparison, the CMCs of the present invention are strongly thixotropic in aqueous solutions (see page 5, line 17). The CMCs disclosed by Rigler are therefore different from the CMCs according to the present invention, and it appears they would also be different from the CMCs of Lange, because thixotropic CMCs will not dissolve in a salt-containing aqueous solution using normal shear but require high shear to achieve dissolution.

Appellants submit that the Nijhoff patent is discussed in the present application on page 1, last paragraph. In Nijhoff, various CMCs are disclosed having a viscosity varying from about 10 mPa.s for a 2 % solution to 42,000 mPa.s for a 1% solution. All of these CMCs have a degree of substitution (DS) of between 0.1 and 0.6, making them generally less suitable in aqueous media due to their relatively low solubility. It is further noted that Nijhoff discloses examples of fruit-based products in which a relatively large amount of CMC, i.e. exceeding about 3 wt%, is used. Use of such large amounts of CMC is undesirable. In low pH environments (i.e. acidic environments) typical for fruit-based products, the solubility of these CMCs is insufficient, resulting in incomplete

dissolution of the CMC, which generally results in a sandy mouth feel of the fruit-based product.

As indicated in the present application at page 2, lines 6-11, use of the state of the art CMCs in fruit has certain disadvantages such as insufficient gelling properties, low solubility, and the requirement that they be used in high amounts. Consequently, in practice, the industry uses pectin instead of CMC in fruit-based products, which is disadvantaged in that there is limited possibility of using other solids in the fruit-based product.

Contrary to conventional CMCs, such as disclosed in Nijhoff and Rigler, the present inventors have found that the use of a CMC in accordance with the present invention in fruit-based products leads *inter alia* to an improvement in gelling properties, flowing properties, consistency, and stability. Additionally, use of these gel forming CMCs effectively prevents fluid loss or syneresis and these CMCs are soluble in both hot and cold water. This is advantageous over, e.g. pectin, as the CMC is dissolved without requiring additional heating, leading to a significant saving of energy and a reduction of costs related therewith. At high temperatures the gelling properties remain unimpaired, avoiding flotation of fruit particles and resulting in a uniform distribution of fruit. A further advantage is that the use of CMCs according to the invention does not require a minimum level of soluble solids (e.g. sugar) as opposed to, e.g. pectin.

2. The Rejection of the Pending Claims Is Based On Impermissible Hindsight

In the most recent Advisory Action, dated December 5, 2008, the Office indicates that "[a]ll applied references disclose the use of CMC in food products thereby rendering it obvious to substitute one type of CMC fpr [*sic*] another type of CMC in a food product in the absence of unexpected results for using the claimed CMC in fruit based products. Contrary to the Office's assertion, Appellants submit that the Office's alleged *prima facie* case of obviousness is based on improper grounds.

As set forth in M.P.E.P. § 2145(X)(A),

> Applicants may argue that the examiner's conclusion of obviousness is based on improper hindsight reasoning. However, "[a]ny judgment on obviousness is in a sense necessarily a reconstruction based on hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made and does not include knowledge gleaned only from applicant's disclosure, such a reconstruction is proper." *In re McLaughlin* 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971).

As noted above, in order to alleviate the deficiencies of Lange, the Office relies on the secondary references of Nijhoff and Rigler. As noted above, the Nijhoff and Rigler patents disclose state of the art, or conventionally known CMCs, and the use of such conventional CMCs are disclosed in fruit-based products. Appellants submit, however, that these secondary references do not disclose the specific CMC's utilized in Lange and/or the present claims. Further, Appellants submit that it is improper for the Office to view the secondary references as suggesting that ALL CMC's would work in fruit-based products, because some will not work. Because neither secondary reference discloses using the specific CMC's of Lange in fruit based products, and because not all CMC's do, in fact, work and/or are useable in fruit based products, Appellants submit that the present rejection is improper.

In determining whether a person of ordinary skill in the art would have been led to the combination of references employed by the Office, Appellants submit that it is improper to simply to use that which the inventor taught against its teacher. In other words, there must be a reason or suggestion in the art for making the combination, other than the knowledge gleaned from an Applicant's disclosure. The suggestion to combine references should not be derived by hindsight from knowledge of the invention itself.

As supported in caselaw, often times, particularly with the aid of hindsight, the art appears combinable or modifiable in a manner that will yield the claimed invention. That itself will not make the resultant modification obvious, however. For example, in *Cardiac Pacemakers, Inc. v. St. Jude Medical, Inc.*, 381 F.3d 1371 (Fed. Cir. 2004), the district court had found the claimed implantable heart stimulator obvious because each of the claimed elements was previously known. Specifically,

"there was a known need to treat mixtures of arrhythmias, and that it would have been obvious to combine known methods of separate treatment." *Id.* at 1377. The Federal Circuit disagreed, stating that "[r]ecognition of a need does not render obvious the achievement that meets that need. There is an important distinction between the general motivation to cure an uncured disease . . ., and the motivation to create a particular cure . . . . Recognition of an unsolved problem does not render the solution obvious." *Id.* Ultimately, the Federal Circuit found the claims were not obvious.

In the present situation, while the cited art may have rendered it obvious to use conventional CMC's in fruit based products, absent prohibited hindsight reliance on Appellants' disclosure, there is no suggestion to use the specific CMC's of the claimed invention (and/or of Lange) in fruit-based products. Here, one of ordinary skill in the art knowing of the general problems with the use of state of the art CMCs in fruit-based products, such as the CMCs of Nijhoff and/or Rigler, would have had little reason to consult Lange. Lange identifies no specific use for its CMC in a particular food product, much less a fruit-based product. Lange merely mentions its use in the food sector, as well as uses in cosmetics and pharmaceutical sectors and for industrial applications that include additives for coating materials, for the sealing of underground cables and for use in tunneling and in civil and underground engineering. Such disclosed uses would more likely have lead one of ordinary skill in the art away from such CMCs in fruit-based products. Appellants submit that only with Appellants' application available as a roadmap, does the art appear combinable or modifiable in a manner that could yield the claimed invention.

3. The Rejection of the Pending Claims Lacks Evidence of a Reasonable Expectation of Success And Is Based on an Improper "Obvious to Try" Rationale

Beyond looking to the prior art to determine if it suggests doing what the inventor has done, one must also consider if the art provides the required expectation of succeeding in that endeavor. Both the suggestion and the expectation of success

must be founded in the prior art, not in applicant's disclosure. Obviousness does not require *absolute* predictability, but a reasonable expectation of success is necessary.

The cited art provides no grounds supporting that there would be a reasonable expectation of success in using the specific CMC's of Lange in fruit based products. More specifically, Lange does not disclose or suggest the use of gel-forming CMCs in fruit-based products. Further, one of ordinary skill in the art, knowing the problems with use of the state of the art CMCs in fruit-based products, would therefore likely not have consulted Lange with a reasonable expectation of solving the above problems, as Lange does disclose or suggest alleviating such problems in fruit based products.

In this regard, the assignee for the present application manufactures many specialty CMC's grades, some are food grade, and some are not. For example, some specialty and/or modified CMC's are used in drilling muds (oilfield applications), as iron ore pelletizing/agglomerating agents and the like. Applicants submit that it cannot be the Office's position that the secondary references make it obvious to use any specialty CMC, including such non-food grade specialized CMC's, in fruit based products. Without more, Appellants submit that Office has failed to establish a *prima facie* case of obviousness and the rejection should be reversed and withdrawn.

Notwithstanding the above, at best, Appellants submit that the Office's alleged rejection based on the combination of references, i.e., it would have been obvious to use CMC's, including the CMC's of Lange, in fruit based products, is based on an improper "obvious to try" rationale in support of its obviousness rejection.

According to M.P.E.P. § 2143(E), to reject a claim based on an "obvious to try" rationale:

> Office personnel must resolve the *Graham* factual inquiries. Then, Office personnel must articulate the following:
>
> (1) a finding that at the time of the invention, there had been a recognized problem or need in the art, which may include a design need or market pressure to solve a problem;

(2) a finding that there had been a finite number of identified, predictable potential solutions to the recognized need or problem;

(3) a finding that one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success; and

(4) whatever additional findings based on the Graham factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

The rationale to support a conclusion that the claim would have been obvious is that "a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely that product [was] not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under § 103."KSR, 550 U.S. at ___, 82 USPQ2d at 1397. If any of these findings cannot be made, then this rationale cannot be used to support a conclusion that the claim would have been obvious to one of ordinary skill in the art.

As a preliminary matter, in the second Advisory Action, dated December 5, 2008, the Office maintained its outstanding rejections, alleging that "[a]ll applied references disclose the use of CMC in food products thereby rendering it obvious to substitute one type of CMC for another type of CMC in a food product in the absence of unexpected results for using the claimed CMC in fruit based products. Further, the Office indicated that "Appellants' reference in the *In re O'Farrell* decision, in the 07-16-08 remarks, is not convincing in view of the recent 'KSR' decision by the U.S. Supreme Court." *Id.*

It is unclear to Appellants as to what in the "*KSR*" decision the Office refers as to why the Appellants' arguments finding support in *In re O'Farrell* are not convincing. As far as Appellants are aware, *In re O'Farrell* was not overruled by the Supreme Court in *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727 (2007). In *KSR*, the Supreme Court merely recognized that "[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has a good reason to pursue the known options within his or her technical grasp." *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1732 (2007). In such circumstances, "the fact that a combination was obvious to try might show that it was obvious under § 103." (emphasis added) *Id.* Thus, the Supreme Court's decision

merely clarified that when certain conditions, such as those identified above, are met, such might evidence the obviousness of the combination under Section 103. Moreover, as to the appropriateness of Appellants' reliance on *In re O'Farrell*, Appellants note that in M.P.E.P. § 2145, titled "Consideration of Applicant's Rebuttal Arguments [R-3] - 2100 Patentability," under Section (X)(B), the M.P.E.P. states that "[a]n applicant may argue the examiner is applying an improper 'obvious to try' rationale in support of an obviousness rejection." Under this Section, the basis for "[t]he admonition that 'obvious to try' is not the standard under § 103 has been directed mainly at two kinds of error."

According to the M.P.E.P., these two kinds of error are as follows:

> In some cases, what would have been 'obvious to try' would have been to vary all parameters or try each of numerous possible choices until one possibly arrived at a successful result, where the prior art gave either no indication of which parameters were critical or no direction as to which of many possible choices is likely to be successful.... In others, what was 'obvious to try' was to explore a new technology or general approach that seemed to be a promising field of experimentation, where the prior art gave only general guidance as to the particular form of the claimed invention or how to achieve it." *In re O'Farrell*, 853 F.2d 894, 903, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988) (citations omitted)" See M.P.E.P. § 2145(X)(B).

Appellants submit, therefore, that Office's comment regarding Appellants' reliance on the *In re O'Farrell* decision is misinformed.

In fact, Appellants submit that *In re O'Farrell* is factually on point with the present case. In the present situation, the secondary references may have made it "obvious to try" other CMC's, and to vary all parameters (such as (DS) and (DP)) or try each of numerous possible choices until one possibly arrived at a successful result. However, the cited art gives no indication of which parameters were critical or no direction as to which of many possible choices is likely to be successful. Without such information, Appellants submit that the present rejection is not supported and must fail.

Furthermore, as set forth in Lange, its alleged invention is directed to a process for producing a substantially fiber-free carboxymethyl cellulose exhibiting certain properties. Among the uses for its CMC, Lange discloses cosmetics, pharmaceutical

and food sectors, and for industrial applications, e.g. as an additive for coating materials, for the sealing of underground cables and for use in tunneling and in civil and underground engineering. (See abstract). Applicants submit that Lange discloses a wide range of applications, only one of which broadly discloses the use of its CMC in "food sectors." (See e.g., Lange at col. 3, lines 46). Lange fails, however, to provide any indication or example for any uses in such food sectors. Applicants submit that Lange, therefore, fails to give any indication of which parameters were critical and no direction as to which of many possible choices of food products for which Lange's CMC would likely be successfully used in. At most, Lange provides only general guidance that its CMC could be used in the food sector, but Lange provides no guidance as to the use of gel-forming CMCs in fruit-based products or any of the problems associated with the state of the art CMCs in fruit-based products.

Likewise, the secondary references, namely Nijhoff and Rigler, disclose state of the art, or conventional, CMCs and their use in fruit-based products. The Office asserts that it would have been obvious to substitute one type of CMC for another type of CMC in a food product. Appellants submit that neither Nijhoff nor Rigler disclose the specific CMCs utilized in Lange and/or the claimed invention. Furthermore, Appellants submit that without any suggestion in Nijhoff or RIgler to utilize the specific CMCs of Lange in a fruit-based product, the Office can only be suggesting that the Nijhoff and Rigler would have suggested to one of ordinary skill in the art that it would have been obvious to substitute any CMC in a fruit-based product. That is, it appears that the Office's ground for the rejection is based on the allegation that it would have been obvious for one of ordinary skill in the art at the time of the invention to vary all parameters or try each of numerous possible choices until one possibly arrived at a successful result, where the neither Nijhoff nor Rigler gave any indication of which parameters were critical or no direction as to which of many possible choices is likely to be successful in arriving at Appellants' invention. Appellants submit that such a basis for the rejection can only be based on an improper obvious to try rationale.

Furthermore, in presenting its alleged *prima facie* case of obviousness, the Office has not met its requisite burden. According to the Federal Circuit, "there must be some

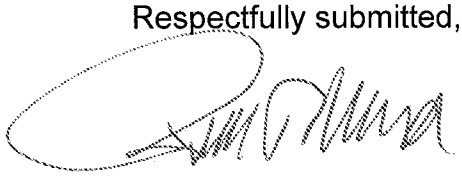
articulated reasoning with some rational underpinning to support the legal conclusion of obviousness" (*In re Kann*, 441, F3d. 977, 988 (CA Fed. 2006) cited with approval in *KSR*). Here, the Office has merely concluded that because Lange, Nijhoff and Rigler all relate to CMCs in food products, it would have been obvious for one of ordinary skill in the art to have substituted any CMC, including the CMC of Lange, in the fruit-based products of Nijhoff and/or Rigler having conventional CMCs. Among the criteria establishing a *prima facie* case of obviousness under an "obvious to try rationale," the Office must, as noted above, establish: (1) a finding that at the time of the invention, there had been a recognized problem or need in the art, which may include a design need or market pressure to solve a problem; (2) a finding that there had been a finite number of identified, predictable potential solutions to the recognized need or problem; and (3) a finding that one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success. Here, the Office has not identified any such problem or need in the art, from either the cited references or otherwise. Nor has the Office identified a finite number of solutions to a recognized problem. Rather, the Office appears to conclude that any CMC could be substituted for another CMC in a fruit-based product, while in contradistinction, Appellants have shown that not all CMCs would work in fruit-based products. Finally, as noted above, the Office has also failed to provide evidence of a reasonable expectation of success for the substitution of Lange's CMC for the convention CMCs of Nijhoff and Rigler.

For all of the above reasons, Appellants submit that the currently pending rejections of claims 1-9 are improper and should be reversed and withdrawn

IX. CONCLUSION

In view of the arguments presented herein Appellant respectfully submits that the appealed claims stand improperly rejected. The rejection of the appealed claims of record should be reversed with instructions to allow these claims over the cited references. Such action is hereby respectfully requested.

Respectfully submitted,



Ralph J. Mancini
Attorney for Applicant(s)
Reg. No. 34,054

Akzo Nobel Inc.
Legal & IP
120 White Plains Road, Suite 300
Tarrytown, NY 10591
(914) 333-7454

X. CLAIMS APPENDIX

1. A fruit-based product that comprises carboxymethyl cellulose (CMC), wherein the CMC is characterized by forming a gel at 25°C after high-shear dissolution in a 0.3 wt% aqueous sodium chloride solution, the final content of the CMC in the aqueous sodium chloride solution being 1 wt% for a CMC having a degree of polymerization (DP) of >4,000, 1.5 wt% for a CMC having a DP of 3,000-4,000, 2 wt% for a CMC having a DP of 1,500-<3,000, and 4 wt% for a CMC having a DP of <1,500, the gel being a fluid having a storage modulus (G') which exceeds the loss modulus (G") over the entire frequency region of 0.01-10 Hz when measured on an oscillatory rheometer operating at a strain of 0.2.

2. The fruit-based product of claim 1, wherein the CMC has a Brookfield viscosity of more than 9,000 mPa.s after high-shear dissolution in a 0.3 wt% aqueous sodium chloride solution, the final content of the CMC in the aqueous sodium chloride solution being 1 wt% for a CMC having a degree of polymerization (DP) of >4,000, 1.5 wt% for a CMC having a DP of >3,000-4,000, 2 wt% for a CMC having a DP of 1,500-3,000, and 4 wt% for a CMC having a DP of <1,500.

3. The fruit-based product of claim 1 wherein the pH of the fruit-based product is between 1 and 6.

4. The fruit-based product of claim 1 wherein the CMC has a DP of 1,500 or more.

5. The fruit-based product of claim 4 wherein the CMC is prepared from linters cellulose or wood cellulose.

6. The fruit-based product of claim 1 wherein the CMC has a DS of 0.6 to 1.2.

7. The fruit-based product of claim 1 wherein the fruit-based product is a jam, a fruit preserve, a pie filling, a fruity sauce, a fruity filling in bakery products, a fruit-based topping, a beverage comprising fruit, a jelly or a sweet.

8. The fruit-based product of claim 1 wherein the CMC is used in combination with pectin, carrageenan, starch, alginate, xanthan, konjac, locust bean gum, guar gum, or food protein.

9. The fruit-based product of claim 1 wherein the CMC is used in an amount of 0.05 to 1.5 wt%, based on the total weight of the fruit-based product.

XI. Evidence Appendix

None.

XII. Related Proceedings Index

None.